

Claims

- [c1] 1.A shut-off valve device for a plastic injection molding system, said valve device comprising:
a housing member, said housing member having an internal cavity and an outlet orifice;
a piston member positioned in said cavity;
said piston having a body member, a head member at one end, a flange member and an internal passageway;
and
a biasing member positioned in said housing member and biasing said piston member in a direction longitudinally away from said orifice.
- [c2] 2.The apparatus as described in claim 1 wherein said head member has a first valve member thereon.
- [c3] 3.The apparatus as described in claim 2 further comprising a retainer member attached to said housing member, said retainer member having a second valve member thereon.
- [c4] 4.The apparatus as described in claim 1 wherein said biasing member is a spring member.

- [c5] 5.The apparatus as described in claim 4 wherein said spring member is a coil spring member.
- [c6] 6.The apparatus as described in claim 1 further comprising at least one heater member positioned on said housing member.
- [c7] 7.An integrated mechanical shut-off valve system comprising:
- (a)a mold member having a first cavity therein;
 - (b)a shut-off valve device positioned in said first cavity;
 - (c)said valve device comprising
 - (i) a housing member having a second cavity therein and an orifice;